Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0290-16-F Plant ID: 0290

Effective Date: 8/24/2016 Expiration Date: 8/31/2021

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Owner: Louisville Paving Company, Inc.
Source: Avoca Asphalt Plant
12613 Avoca Road (13400 Old Henry Road)
Louisville, Kentucky 40223

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve (12) months and no later than ninety (90) days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant:	PM_{10}	CO	NO_X	VOC	Total HAPs
Tons/year:	< 50	< 50	< 50	< 50	< 25

Application No.:	73103	Application Received: 02/21/2006
	73106	09/02/2008
	11404	11/24/2010
	34927	01/04/2012

Permit Writer: Elise Venard

Date of Public Notice: 06/07/2016; 07/22/2016

Paul Green

Air Pollution Control Officer
August 24, 2016

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FEDOOP Permit Revisions/Changes

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	0195-01-F	10/16/2001	07/01/2001	Initial	Entire Permit	Initial Permit Issuance
Rev. 1	N/A	10/16/2001	NA	Administrative	Page 1	Name change with no change in ownership
N/A	O-0290-16-F	08/24/2016	06/07/2016; 07/22/2016	Renewal	Entire Permit	Permit renewal; Incorporation of name change, construction permits and Dust Control Plan parameters.
				Administrative	Pages 15, 16, and 26	Corrected PM and PM_{10} emission factors for aggregate storage pile. Added footnote #16 to Emission Unit Plant-Wide to explain that organics TACs did not need limits for STAR compliance. Second public notice is to correct TAC limits for the HMA Emission Unit U4

Construction Permit History:

Permit No.	Issue Date	Description
661-07-C	12/31/2008	RAP (Recycled Asphalt Product) operation including: one aggregate stockpile, two processed stockpiles, two receiving hoppers, one crusher with hopper, two aggregate sorting screens, and six (6) conveyors. Equipped with water suppression system to control dust emissions.
56-10-C	07/09/2010	HMA (Hot Mix Asphalt) operation including: one aggregate stockpile, one counterflow drum mixer with burner, one transfer hot oil heater with tank, a cyclone precipitator with miner filler silo and baghouse, seven receiving hoppers, five conveyors, four drag-slat conveyors, one aggregate sorting screen, four product storage silos, one loadout station

Abbreviations and Acronyms

AP-42 - AP-42, *Compilation of Air Pollutant Emission Factors, published by U.S.EPA*
APCD - Louisville Metro Air Pollution Control District
BAC - Benchmark Ambient Concentration
BACT - Best Available Control Technology
Btu - British thermal unit
CEMS - Continuous Emission Monitoring System
CFR - Code of Federal Regulations
CO - Carbon monoxide
District - Louisville Metro Air Pollution Control District
EA - Environmental Acceptability
gal - U.S. fluid gallons
GHG - Greenhouse Gas
HAP - Hazardous Air Pollutant
HCl - Hydrogen chloride
Hg - Mercury
hr - Hour
in. - Inches
lbs - Pounds
l - Liter
LMAPCD - Louisville Metro Air Pollution Control District
mmHg - Millimeters of mercury column height
MM - Million
NAICS - North American Industry Classification System
NO_x - Nitrogen oxides
PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns
$PM_{2.5}$ - Particulate Matter less than 2.5 microns
ppm - parts per million
PSD - Prevention of Significant Deterioration
psia - Pounds per square inch absolute
PTE - Potential to Emit
QA - Quality Assurance
RACT - Reasonably Available Control Technology
SIC - Standard Industrial Classification
SIP - State Implementation Plan
SO_2 - Sulfur dioxide
STAR - Strategic Toxic Air Reduction
TAC - Toxic Air Contaminant
UTM - Universal Transverse Mercator
VOC - Volatile Organic Compound
w.c. - Water column
year - Any period of twelve consecutive months, unless "calendar year" is specified
yr - Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.

2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.

3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.

5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.

6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.

8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.

9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as

the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.

10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM_{10}, $PM_{2.5}$, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA; or any combination of greenhouse gasses whose combined global warming potential equals or exceeds 100,000 tons CO_2-equivalent, as defined in 40 CFR 98. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.

11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.

12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All annual compliance reports shall include the following per Regulation 2.17, section 3.5.

    - A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
    - The signature and title of a responsible official of the company.

    The report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report.

13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emissions Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures

Regulation	Title
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Fees
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption of Federal New Source Performance Standards

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.

16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.

17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

Air Pollution Control District
Suite 303
701 W. Ormsby Avenue
Louisville, KY 40203-3137

Emission Unit: Plant-wide

Plant-wide Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	2.4
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

Plant-wide Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **PM/PM_{10}**

i. The owner or operator shall not allow the plant-wide emissions of the pollutant PM_{10} to equal or exceed fifty (50) tons during any consecutive twelve (12) month period. [1] (Regulation 2.17, section 5.1) (Permit 56-10-C)

ii. The owner or operator shall not allow the plant-wide emissions of the pollutant PM to equal or exceed fifty (50) tons during any consecutive twelve (12) month period. (Permit 56-10-C)

iii. No owner or operator shall cause or permit the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. (Regulation 1.14, section 2.4)(Permit 661-07-C)

iv. The owner or operator shall take reasonable precautions to prevent particulate matter from becoming airborne beyond the work site, through stipulations and conditions stated in the attached District-approved "Fugitive Dust Control Plan". (Regulation 1.14)(Permit 661-07-C)

v. The owner or operator shall operate and maintain the water suppression system at all locations in the facility as necessary to comply with the PM/PM_{10} standards specified in this permit. [2] (Regulation 2.17, section 5.1)

1) For each operating day, the owner or operator shall daily operate and maintain a water suppression system at all times the process equipment is in operation. If it is determined that weather conditions have contributed to the control of fugitive dust emissions, watering operations may be suspended until such time as it appears necessary for control of fugitive dust emissions. (See Attachment B "Fugitive Dust Control Plan")

2) The owner or operator shall perform a weekly visual inspection of the structural and mechanical integrity of the water suppression system for signs of damage, leakage, corrosion, or other equipment defects and repair as needed.

[1] District Potential to Emit calculations for this facility categorize this site as potentially uncontrolled major source for PM_{10}, CO, NOx, VOC, and total HAP. Louisville Paving, Inc. is currently permitted to operate as a Synthetic Minor Source (FEDOOP) with STAR limits.

[2] The criteria pollutant PM/PM_{10} must be controlled to be less than the 50 tn/yr emission limit of Regulation 2.17 through production limitations, water suppression, and PM emission control systems. (Permit 56-10-C)

vi. The owner or operator shall insure that the process cyclone and baghouse operate as designed, and at all times that the counterflow drum mix asphalt plant is in operation to comply with the PM_{10} standards specified in this permit. [3] (Regulation 2.17, section 5.1)

1) The owner or operator shall daily operate and maintain the process cyclone and baghouse at all times counterflow drum mixer (E-18) is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.

2) The owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the cyclone and baghouse for signs of damage, air leakage, corrosion, etc. and repair shall be performed as needed.

b. **CO**

The owner or operator shall not allow the plant-wide emissions of the pollutant CO to equal or exceed fifty (50) tons during any twelve (12) consecutive month period. [3] (Regulation 2.17, section 5.1) (Permit 56-10-C)

c. **NO_X**

The owner or operator shall not allow the plant-wide emissions of the pollutant NO_X to equal or exceed fifty (50) tons during any twelve (12) consecutive month period. [4] (Regulation 2.17, section 5.1) (Permit 56-10-C)

d. **VOC**

The owner or operator shall not allow the plant-wide emissions of the pollutant VOC to equal or exceed fifty (50) tons during any twelve (12) consecutive month period. [4] (Regulation 2.17, section 5.1) (Permit 56-10-C)

e. **HAP**

The owner or operator shall not allow or cause the plant-wide emissions of all HAPs combined to equal or exceed 25.0 tons during any consecutive 12-month period. (Regulation 2.17, section 5.1)

f. **TAC**

i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established

[3] Source requested a synthetic minor limit of 500,000 tn/yr of hot mix asphalt produced in letter received by District of August 27, 2008. The synthetic limit reduces the controlled emissions of each criteria pollutant to less than fifty (50) tons during any twelve (12) consecutive month period standards. (Permit 56-10-C)

by modeling or determined by the District to be *de minimis*. (Regulations 5.00 and 5.21)) [4]

ii. The owner or operator shall submit with the application for construction for any new emission unit the STAR EA Demonstration for all Category 1 through Category 4 TACs emitted from that emission unit.

iii. The owner or operator shall submit a *plant-wide* emissions-based EA Demonstration to the District showing compliance with the *plant-wide* EA goals of 7.5 for new and existing, 3.8 for all new combined, and 1.0 for each TAC from each process when a change occurs that increases emissions above *de minimis* or previously modeled values.

iv. If the TAC does not have an established BAC or de minimis value, the owner or operator shall calculate and report these values. The form, located in Attachment C - Determination of Benchmark Ambient Concentration (BAC), may be used for determining BAC and de minimis values.

g. **Unit Operation**

i. The owner or operator shall not allow the total production of hot mix asphalt to exceed the synthetic limit of five hundred thousand tons (500,000 tn) during any twelve (12) month consecutive period. [3] (Regulation 2.17, section 5.1) (Permit 56-10-C)

ii. The owner or operator shall not combust more than any combination of the following quantities of fuel, that would allow the total production of hot mix asphalt to exceed the synthetic limit of five hundred thousand tons (500,000 tn) during any twelve (12) month consecutive period. [5] (Regulation 2.17, section 5.1) (Permit 56-10-C)

1) The owner or operator shall not combust more than a total of four hundred sixty thousand gallons (460,000 gal.) during any twelve

[4] Screen3 modeling confirmed all TACS are below the Environmental Acceptability Goals within 100 ft of stack, when the plant emissions are controlled and #2 fuel oil is used, when the yearly production was based on the synthetic limit of 500,000 tn/yr of hot mix asphalt. Utilizing natural gas fuel will further decrease the emissions, but several AP-42 emission factors are the same for controlled emissions of #2 fuel oil and natural gas. (Permit 56-10-C)

[5] The emissions of the criteria pollutants NO_X, SO_2, VOC and PM_{10} do not exceed the 50 tn/yr limit when the source does not exceed the fuel limits required to produce the synthetic limit of 500,000 tn/yr of hot mix asphalt, while using the cyclone collector and baghouse, per the district approved PTE of 3/8/10, whether using #2 fuel oil, #4 fuel oil or natural gas in the drum style hot mix asphalt plant and #2 fuel oil in the asphalt tank heater. (Permit 56-10-C)

(12) consecutive month period of #2 and #4 fuel oil in the drum mix asphalt plant heater/dryer. [6] (Regulation 2.17, section 5.1)

2) The owner or operator shall not combust more than sixty-two million cubic feet (62 mmcf) during any twelve (12) consecutive month period of natural gas in the drum mix asphalt plant heater/dryer. [8] (Regulation 2.17, section 5.1)

3) The owner or operator shall not combust more than one hundred twenty seven thousand none hundred gallons (127,900 gal) during any twelve (12) month consecutive period of #2 fuel oil in the asphalt tank heater. (Regulation 2.17, section 5.1)(Permit 56-10-C)

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **PM/PM_{10}**

i. The owner or operator shall monthly maintain records, including calculations, which show the plant-wide total PM/PM_{10} emissions during each calendar month and consecutive 12-month period.

ii. The owner or operator shall monthly calculate the PM_{10} emissions from aggregate processing based on aggregate throughput and emission factors stated in the table below unless another method is approved in writing by the District.

Emission Source	Uncontrolled PM_{10}	Controlled PM_{10}	Emission Factor Sources
Aggregate Storage Pile*	0.256 lb/ton	0.128 lb/ton [7]	AP-42 Chapter 13.2.1 AP-42 Chapter 13.2.2 AP-42 Chapter 13.2.4 EPA-450/3-88-008
Tertiary Crushing	0.0024 lb/ton	0.00054 lb/ton	AP-42 Chapter 11.19.2-2
Screening	0.0087 lb/ton	0.00074 lb/ton	AP-42 Chapter 11.19.2-2
Aggregate transfer	0.0033 lb/ton	0.0017	AP-42 Chapter 11.12-2
Sand transfer	0.00099 lb/ton	0.000495	AP-42 Chapter 11.12-2

* This emission factor includes loading, unloading, transport, and wind action on a sitting storage pile.

iii. Using the above Emission Factor calculating the tons per month PM_{10} emissions, for both controlled and uncontrolled conditions, is as follows:

[6] The quantities of fuel are the fuel quantities necessary to produce 250,000 tons of HMA each, for a combined total of 500,000 ton per twelve (12) consecutive month period total production. Source did not have an estimate of the amounts of each type of fuel that would be consumed each year. (Permit 56-10-C)

[7] Controlled emission factor for Aggregate Storage, Aggregate transfer, and Sand transfer derived from District estimated 50% control efficiency for water suppression.

E_{PM10} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{PM10} = controlled or uncontrolled PM_{10} emissions (tons) during a month

X = the amount of aggregate throughput (tons) processed during a month

iv. The owner or operator shall monthly calculate the PM emissions from aggregate processing based on aggregate throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	Uncontrolled PM	Controlled PM	Emission Factor Sources
Aggregate Storage Pile*	1.227 lb/ton	0.613 lb/ton [8]	AP-42 Chapter 13.2.1 AP-42 Chapter 13.2.2 AP-42 Chapter 13.2.4 EPA-450/3-88-008

* This emission factor includes loading, unloading, transport, and wind action on a sitting storage pile.

v. Using the above Emission Factor calculating the tons per month PM emissions, for both controlled and uncontrolled conditions, is as follows:

E_{PM} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{PM} = controlled or uncontrolled PM emissions (tons)

X = the amount of material throughput (tons) processed

vi. The owner or operator shall account for the insignificant activity PM emissions from the Aggregate Storage Piles (E-1, R-1, R-10, R-14) when totaling the monthly plant-wide emissions. Since the emissions are minor the owner or operator may use the potential PM emissions as the monthly emissions. District approved PTE is 0.09 tons/month each for the Aggregate Storage Piles.

vii. The owner or operator shall monthly calculate the PM emissions from aggregate processing based on aggregate throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

[8] Controlled emission factor for Aggregate Storage pile derived from District estimated 50% control efficiency for water suppression.

Emission Source	Uncontrolled PM	Controlled PM	Emission Factor Sources
Tertiary Crushing	0.0054 lb/ton	0.0012 lb/ton	AP-42 Chapter 11.19.2-2
Screening	0.025 lb/ton	0.0022 lb/ton	AP-42 Chapter 11.19.2-2
Aggregate transfer	0.0069 lb/ton	0.0035 [9]	AP-42 Chapter 11.12-2
Sand transfer	0.0021 lb/ton	0.0011	AP-42 Chapter 11.12-2

viii. Using the above Emission Factor calculating the tons per month PM emissions, for both controlled and uncontrolled conditions, is as follows:

E_{PM} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{PM} = controlled or uncontrolled PM emissions (tons) during a month

X = the amount of material throughput (tons) processed during a month

ix. The owner or operator shall daily maintain records of the amount of product (HMA) produced that day.

x. The owner or operator shall monthly calculate the PM_{10} emissions from the HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	Uncontrolled PM_{10}	Controlled PM_{10}	Emission Factor Sources
Drum Mixer/Dryer	6.5 lb/ton	0.023 lb/ton	AP-42 Chapter 11.1-3
Silo filling	0.000585 lb/ton	0.000585 lb/ton	AP-42 Chapter 11.1-14
Plant load-out	0.000521 lb/ton	0.000521 lb/ton	AP-42 Chapter 11.1-14

xi. Using the above Emission Factor calculating the tons per month PM_{10} emissions, for both controlled and uncontrolled conditions, is as follows:

E_{PM10} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{PM10} = controlled or uncontrolled PM_{10} emissions (tons) during a month

X = the amount of HMA (tons) produced during a month

xii. The owner or operator shall monthly calculate the PM emissions from HMA production based on product throughput and the emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	Uncontrolled	Controlled	Emission Factor

[9] Controlled emission factor for Aggregate transfer and Sand transfer derived from District estimated 50% control efficiency for water suppression.

	PM	PM	Sources
Drum Mixer/Dryer	28 lb/ton	0.033 lb/ton	AP-42 Chapter 11.1-3
Silo filling	0.000585 lb/ton	0.000585 lb/ton	AP-42 Chapter 11.1-14
Plant load-out	0.000521 lb/ton	0.000521 lb/ton	AP-42 Chapter 11.1-14

xiii. Using the above Emission Factor calculating the tons per month PM emissions, for both controlled and uncontrolled conditions, is as follows:

E_{PM} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{PM} = controlled or uncontrolled PM emissions (tons) during a month

X = the amount of HMA (tons) produced during a month

xiv. The owner or operator shall account for the insignificant activity PM_{10} emissions from the Aggregate Storage Piles (E-1, R-1, R-10, and R-14) and Load-out Station (E-23) when totaling the monthly plant-wide emissions. Since the emissions are minor the owner or operator may use the potential PM_{10} emissions as the monthly emissions. District approved PTE is 0.04 tons/month each for the Aggregate Storage Piles and 0.38 tons/month for the Load-out Station.

xv. The owner or operator shall account for the insignificant activity PM emissions from the Load-out Station (E-23) when totaling the monthly plant-wide emissions. Since the emissions are minor the owner or operator may use the potential PM emissions as the monthly emissions. District approved PTE is 0.38 tons/month for the Load-out Station.

xvi. For each operating day the owner or operator shall record whether the water suppression system was not in operation when associated processing equipment was active. Records shall be made that day and include:

1) Date and duration of bypass

2) A calculated estimation of the uncontrolled PM/PM_{10} emissions during the bypass event using the uncontrolled emission factors in the tables above.

xvii. For each operating week the owner or operator shall monitor and record the results of the weekly visual inspection of the water suppression system. Records shall be made the day of the inspection and include:

1) Date of the inspection;

2) Name of the person that performed the inspection;

3) Description of any equipment defects observed including damages, leakage, corrosion, or other defects that would cause a reduction on the control efficiency;

4) Description of any repairs made or replacement of system components.

xviii. For each operating day the owner or operator shall record whether the process cyclone collector and baghouse were bypassed or not in operation when the counterflow drum mix asphalt plant was in operation. Records shall be made that day and include:

1) Date and duration of bypass;

2) A calculated estimation of the uncontrolled PM/PM_{10} emissions during the bypass event using the uncontrolled emission factors in the tables above.

xix. The owner or operator shall monthly keep records of the visual inspection of the structural and mechanical integrity of the process cyclone and baghouse. Records shall be made the day of the inspection and include:

1) Date of the inspection;

2) Name of the person that performed the inspection;

3) Description of any equipment defects observed including damages, leakage, corrosion, or other defects that would cause a reduction on the control efficiency;

4) Description of any repairs made or replacement of system components; and

5) Description of all corrective actions taken to abate the situation.

b. **CO**

i. The owner or operator shall monthly maintain records, including calculations, which show the plant-wide total CO emissions during each calendar month and consecutive 12-month period. [10]

ii. The owner or operator shall monthly calculate the CO emissions from HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District. [11]

Emission Source	CO	Emission Factor Sources
Drum mixer	0.13 lb/ton	AP-42 Chapter 11.1-7
Silo filling	0.00118 lb/ton	AP-42 Chapter 11.1-14

[10] The criteria pollutant CO must be controlled to be less than the 50 tn/yr emission limit of Regulation 2.17 through production limitations.

[11] Emission factors for CO and VOC were derived from table 11.1.14 formulas using a default temperature of 325°F for the asphalt temperature "T" and the asphalt volatility "V" value of (-0.5). (Permit 56-10-C)

Plant load-out	0.00134 lb/ton	AP-42 Chapter 11.1-14

iii. Using the above Emission Factors calculating the tons per month CO emissions is as follows:

E_{CO} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{CO} = CO emissions (tons) during a consecutive 12-month period

X = the amount of HMA produced (tons), during a consecutive 12-month period

iv. The owner or operator shall account for the insignificant activity CO emissions from the Load-out Station (E-23) when totaling the monthly plant-wide emissions. Since the emissions are minor the owner or operator may use the potential CO emissions as the monthly emissions. District approved PTE is 0.24 tons/month for the Load-out Station.

c. **NO_X**

i. The owner or operator shall monthly maintain records, including calculations, which show the plant-wide total NO_X emissions during each calendar month and consecutive 12-month period. [12]

ii. The owner or operator shall monthly calculate the NO_X emissions from HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	NO_X	Emission Factor Sources
Drum mixer burning No. 2 fuel oil	0.055 lb/ton	AP-42 Chapter 11.1-7
Drum mixer burning natural gas	0.026 lb/ton	AP-42 Chapter 11.1-7

iii. Using the above Emission Factors calculating the tons per month NO_X emissions is as follows:

E_{NOX} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{NOX} = NO_X emissions (tons) during a consecutive 12-month period

X = the amount of HMA produced (tons), during a consecutive 12-month period

[12] The criteria pollutant NO_X must be controlled to be less than the 50 tn/yr emission limit of Regulation 2.17 through production limitations.

d. **VOC**

i. The owner or operator shall monthly maintain records, including calculations, which show the plant-wide VOC emissions during each calendar month and consecutive 12-month period. [13]

ii. The owner or operator shall monthly calculate the VOC emissions from HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District. [12]

Emission Source	VOC	Emission Factor Sources
Drum mixer	0.032 lb/ton	AP-42 Chapter 11.1-7
Silo filling	0.01214 lb/ton	AP-42 Chapter 11.1-14
Plant load-out	0.004144 lb/ton	AP-42 Chapter 11.1-14

iii. Using the above Emission Factors calculating the tons per month VOC emissions is as follows:

E_{VOC} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{VOC} = VOC emissions (tons) during a consecutive 12-month period

X = the amount of HMA produced (tons), during a consecutive 12-month period

iv. The owner or operator shall account for the insignificant activity VOC emissions from the liquid storage tanks and Load-out Station when totaling the monthly plant-wide emissions. Since the emissions are minor the owner or operator may use the potential VOC emissions as the monthly emissions. District approved PTE is 10.0 pound VOC/month/tank and 0.76 tons/month for the Load-out Station.

e. **HAP**

i. The owner or operator shall monthly maintain records, including calculations, which show the plant-wide total HAP emissions during each calendar month and consecutive 12-month period. [14]

ii. The owner or operator shall maintain a copy of the material safety data sheet (MSDS/SDS) for each HAP-containing material used at this plant.

[13] The criteria pollutant VOC must be controlled to be less than the 50 tn/yr emission limit of Regulation 2.17 through production limitations.

[14] The Total HAPs do not exceed the 25 tn/yr limit and no single HAP exceeds the 10 tn/yr limit, when the source does not exceed the synthetic limit of 500,000 tn/yr of hot mix asphalt production while using the cyclone collector and baghouse, per the district performed PTE of 3/8/10, whether using #2 fuel oil or natural gas in the drum style hot mix asphalt plant and #2 fuel oil in the asphalt tank heater. (Permit 56-10-C)

iii. The owner or operator shall monthly maintain records of the name, quantity used, and HAP content for fuel combusted and any other HAP containing material used during each calendar month and consecutive 12-month period.

iv. The owner or operator shall monthly calculate the HAP emissions from HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	HAP	Emission Factor Sources
Drum mixer using No. 2 oil with fabric filter	0.0087 lb//ton	AP-42 Chapter 11.1-10
Drum mixer using Natural Gas with fabric	0.0053 lb/ton	AP-42 Chapter 11.1-10

v. Using the above Emission Factors calculating the tons per month HAP emissions is as follows:

E_{HAP} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{HAP} = HAP emissions (tons) during a consecutive 12-month period

X = the amount of HMA produced (tons), during a consecutive 12-month period

f. **TAC**

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results. [15]

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis* at the time of the change.

g. **Unit operation**

i. The owner or operator shall monthly maintain records of the totals of the amounts of HMA produced during each month and consecutive twelve (12) month period.

[15] The TAC emissions from the combustion of natural gas are considered to be "de Minimis emissions" by the District. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler or turbine, but does not include the other emissions from a process or process equipment that are not the products of the combustion of natural gas. (Regulation 5.01, section 1.6.7) (Permit 56-10-C)

ii. The owner or operator shall monthly maintain records of the totals of the amounts and types of fuel combusted by each affected facility, during each month and consecutive twelve (12) month period.

1) The owner or operator shall maintain a record of the fuel oil certifications.

2) The owner or operator shall keep receipts of each shipment of fuel oil received. The receipts shall include the date of delivery, the quantity of fuel oil received, the grade of fuel oil received and an analysis of the sulfur content of the fuel oil.

3) The owner or operator shall maintain a record of the amount of fuel oil used each month, as follows: fuel oil usage expressed in gallons and identified by number (*i.e.*, #2, #4, etc.).

4) The owner or operator shall maintain a record of the amount of natural gas used each month.

S3. **Reporting** (Regulation 2.17, section 5.2)

a. **PM/PM_{10}**

i. The owner or operator shall report the following plant-wide PM/PM_{10} emissions records in the annual compliance report:

1) The beginning and end date of the reporting period.

2) The monthly and twelve (12) consecutive month period totals of PM/PM_{10} plant-wide emissions emitted each month during the reporting period.

ii. The owner or operator shall report the following water suppression system records:

1) The beginning and end dates of the reporting period;

2) Any deviation from the requirement to conduct or maintain records of the weekly visual inspection of the structural and mechanical integrity of the water dust suppression system.

3) Any failure to operate or maintain the water suppression system which would have resulted in reduced control performance;

4) The calculated lb/operational error event PM/PM_{10} emissions for each excursion; or

5) A negative declaration if no excursion occurred.

iii. The owner or operator shall report the following process cyclone and baghouse records:

1) The beginning and end dates of the reporting period;

2) Any deviation from the requirement to conduct or maintain records of the weekly visual inspection of the structural and mechanical integrity of the process cyclone and baghouse.

3) All periods in the reporting period when the process cyclone and baghouse were offline and the counterflow drum mixer was in operation.

4) A calculated quantity of PM/PM_{10} emitted in tons for each by-pass event.

5) A negative declaration if no by-passes occurred.

b. **CO**

i. The owner or operator shall report the following plant-wide CO emissions records:

1) The beginning and end dates of the reporting period.

2) The owner or operator shall report the monthly and twelve (12) consecutive month period totals of the CO plant-wide emissions emitted each month during the reporting period.

c. **NO_X**

i. The owner or operator shall report the following plant-wide NO_X emissions records:

1) The beginning and end dates of the reporting period.

2) The owner or operator shall report the monthly and twelve (12) consecutive month period totals of the NO_X plant-wide emissions emitted each month during the reporting period.

d. **VOC**

i. The owner or operator shall report the following plant-wide VOC emissions records:

1) The beginning and end dates of the reporting period.

2) The owner or operator shall report the monthly and twelve (12) consecutive month period totals of the VOC plant-wide emissions emitted each month during the reporting period.

e. **HAP**

i. The owner or operator shall report the following plant-wide HAP emissions records:

1) The beginning and end dates of the reporting period.

2) The total plant-wide calendar month emissions and consecutive 12-month emission of all HAPs combined for each month in the reporting period.

f. **TAC**

i. The owner or operator shall report the following plant-wide TAC emissions records:

1) The beginning and end dates of the reporting period.

2) The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

3) For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21, sections 4.22 – 4.24)

4) The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material.

g. **Unit Operation**

i. The owner or operator shall report the following plant-wide Unit Operation records:

1) The beginning and end dates of the reporting period;

2) Any failure to monitor or record fuel oil certifications or fuel oil shipment receipts;

3) The monthly and twelve (12) consecutive month period totals of hot mix asphalt produced during each month of the reporting period.

4) The monthly and twelve (12) consecutive month total of natural gas usage, per process, for each month of the reporting period.

5) The monthly and twelve (12) consecutive month total of No. 2 and No 4 fuel oil usage, per process, for each month of the reporting period.

Comments for Plant-wide Requirements

Louisville Paving Company submitted the TAC Environmental Acceptability Demonstration to the District in September 2008. SCREEN3 air dispersion modeling was performed for each emission unit that has non-de Minimis TAC emissions. Compliance with the STAR EA Goals was demonstrated in the revised EA Demonstration submitted in April 2009. The District reviewed the EA Demonstrations submitted by the source. Based on SCREEN3 modeling results and PTE (controlled with both a production limit and fabric filter) for HMA unit, the plant-wide risk values are in compliance with all STAR EA goals. The following table demonstrates that the carcinogen risk and non-carcinogen risk values comply with the STAR EA goals required in Regulation 5.21.

Plant-wide Sum	Plant-wide	
Industrial Total R_C	**25.32**	< 75
Non-Ind. Total R_C	**4.66**	<7.5
Industrial Total R_{NC} (max)	**2.52**	< 3.0
Non-Ind. Total R_{NC} (max)	**0.46**	< 1.0

TAC[16],[17]	**CAS #**	**Industrial**		**Non-Ind.**		**EA Demo**
		R_C	**R_{NC}**	**R_C**	**R_{NC}**	
Arsenic	7440-38-2	0.83	0.01	0.15	0.00	Meet
Benzene	71-42-2	0.13	0.00	0.02	0.00	Meet
Cadmium	7440-43-9	1.10	0.03	0.20	0.01	Meet
Chromium VI	7440-47-3	5.42	0.06	1.00	0.01	Meet
Formaldehyde	50-00-0	5.44	0.05	1.00	0.01	Meet
Nickel	7440-02-0	5.43	1.47	1.00	0.27	Meet
Cobalt	7440-48-4	5.43	0.24	1.00	0.04	Meet
Lead	7439-92-1	0.99	0.00	0.18	0.00	Meet
Naphthalene	91-20-3	0.46	0.00	0.08	0.00	Meet
Ethylbenzene	100-41-4	0.09	0.00	0.02	0.00	Meet

[16] The organic TAC Formaldehyde is controlled via HMA production limit.

[17] The metallic TACs (Cobalt, Chromium VI and Nickel) are controlled via fabric filter associated with the HMA unit.

Emission Unit U1: Aggregate Stockpiles

U1 Applicable Regulations: [18]

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.08	Standards of Performance for New Process Operations	3.1.1, 3.1.2

U1 Emission Points:

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
E-1 (IA)	Virgin aggregate stockpiles	7.08	C-3	NA	1991
R-1 (IA)	Virgin RAP stockpile				
R-10 (IA)	Processed RAP stockpile #1				
R-14 (IA)	Processed RAP stockpile #2				

U1 Control Devices:

Control ID	Description	Control Efficiency	Performance Indicator	Stack ID
C-3	Water suppression system	50%	NA	NA

[18] The District STAR regulations are not applicable to this unit because this unit does not emit any TACs.

U1 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **PM/PM_{10}**

i. The owner or operator shall not cause or allow the emissions of particulate matter from the listed emission points to exceed the following limits: (Regulation 7.08, section 3.1.2, Table 1)

Emission Point ID	Equipment	Capacity	PM Limit (lb /hr)
E-1	Virgin aggregate stockpiles	39000 ft^3	37.5
R-1	Virgin RAP stockpile	52000 ft^3	37.5
R-10	Processed RAP stockpile #1	52000 ft^3	37.5
R-14	Processed RAP stockpile #2	52000 ft^3	37.5

ii. For additional PM/PM_{10} standards see Emission Unit Plant-wide.

b. **Opacity**

The owner or operator shall not allow or cause visible emissions to equal or exceed 20% opacity. (Regulation 7.08, section 3.1.1)

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **PM/PM_{10}**

i. There are no monitoring or record keeping requirements related to the lb/hr emission standard for this emission unit to comply with Regulation 7.08. [19]

ii. For additional PM/PM_{10} monitoring and record keeping requirements see Emission Unit Plant-wide.

b. **Opacity**

i. The owner or operator shall monthly conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

[19] The District has determined that the stockpiles under standard conditions and stated production limits cannot exceed hourly PM lb/hr limits uncontrolled.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

S3. **Reporting** (Regulation 2.17, section 5.2)

a. **PM/PM_{10}**

i. There are no reporting requirements related to the lb/hr emission standard for this emission unit to comply with Regulation 7.08.

ii. For additional PM/PM_{10} reporting requirements see Emission Unit Plant-wide.

b. **Opacity**

i. The owner or operator shall report the following emission unit opacity records:

1) The beginning and end date of the reporting period.

2) The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If not visible emissions were observed during the reporting period, the owner or operator shall submit a negative declaration.

3) The date, time and results of each Method 9 conducted. If there were no Method 9 tests performed during the reporting period, the owner or operator shall submit a negative declaration.

4) A description of any corrective action taken for each exceedance of the opacity standard.

5) A negative declaration if no exceedances occurred.

Emission Unit U2: Storage Tanks

U2 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	1 through 4

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

U2 Equipment:

Emission Point	Description	Applicable Regulation [20]	Control ID	Stack ID	Installation Date
T-1 (IA)	Asphalt tank #1, 25000-gallon	7.12	NA	NA	5/2006
T-2 (IA)	Asphalt tank #2, 22000-gallon		NA	NA	5/2006
T-3 (IA)	Asphalt tank #3, 22000 gallon [21]		NA	NA	5/2006
T-4 (IA)	No. 4 fuel oil tank, 15000 gallon	7.12	NA	NA	5/2006
T-5 (IA)	Asphalt additive tank, 7500 gallon		NA	NA	5/2006
T-6 (IA)	Hot oil tank (50 gallons) with 2 MMBtu/hr heater/burner [22]	5.00, 5.01, 5.14, 5.20, 5.22, 5.23	NA	NA	5/2006

[20] This source is subject to 40 CFR 60. Subpart I, however, the regulations stipulated do not apply to the equipment because it is not associated with an emission control system.

[21] The tanks are not subject 40 CFR 60, Subpart Kb because the vapor pressure is less than the required 1.5 kPa.

[22] This 2 MMBtu heater/burner is not subject to 7.06 because it is not an indirect heat exchanger.

U2 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **VOC**

i. The owner or operator shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia in the storage vessel(s), unless the storage tank is equipped with a permanent submerged fill pipe. (Regulation 7.12, section 3.3)

ii. For additional VOC standards see Emission Unit Plant-wide.

b. **SO_2**

The owner or operator shall limit the sulfur content of the #2 fuel oil combusted in the asphalt tank heater (T-6) to contain less than 0.5% sulfur by weight. (Regulation 2.17, section 5.1)(Permit 56-10-C)

c. **TAC**

See Emission Unit Plant-wide. [23]

d. **Unit Operation**

For Transfer Hot Oil heater (T-6) asphalt production limitations and fuel combustion standards and limitations see Emission Unit Plant-wide.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **VOC**

i. The owner or operator of the storage vessel(s) shall maintain records of the material stored and the vapor pressure in each storage vessel and if the contents of the storage vessel(s) are changed a record shall be made of the new contents, the date of the change, and the new vapor pressure in order to demonstrate compliance.

ii. The owner or operator shall keep a record that shows if the storage vessel is equipped with a submerged fill pipe. Submerged fill pipe means any fill pipe the discharge of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean every fill pipe the discharge opening of

[23] It has been demonstrated that the TAC emissions from the heater/burner (T-6) are *de Minimis* uncontrolled.

which is entirely submerged when the liquid level is 2 times the fill pipe diameter above the bottom of the tank.

iii. For additional VOC monitoring and record keeping requirements see Emission Unit Plant-wide.

b. **SO_2**

The owner or operator shall monthly maintain records of the shipment certification provided by the supplier upon delivery.

c. **TAC**

For additional TAC monitoring and record keeping requirements see Emission Unit Plant-wide.

d. **Unit Operation**

For fuel combustion monitoring and record keeping requirements for the asphalt tank heater (T-6) see Emission Unit Plant-wide.

S3. **Reporting** (Regulation 2.17, section 5.2)

a. **VOC**

i. There are no VOC reporting requirements for this emission unit related to Regulation 7.12.

ii. For additional VOC reporting requirements see Emission Unit Plant-wide.

b. **SO_2**

i. The owner or operator shall report the following emission unit SO_2 records in the annual compliance report:

1) The beginning and end date of the reporting period.

2) If an accepted fuel shipment exceeds the sulfur content limit.

3) Any failure to monitor or record fuel shipment certifications

4) A negative declaration if no standards or monitoring and recording excursions occurred.

c. **TAC**

For additional TAC reporting requirements see Emission Unit Plant-wide.

d. **Unit Operation**

For additional Unit Operation reporting requirements for the asphalt tank heater (T-6) see Emission Unit Plant-wide.

Emission Unit U3: RAP Operation

U3 Applicable Regulations: [24]

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.08	Standards of Performance for New Process Operations	3.11, 3.12

U3 Equipment:

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
E-9	RAP bin #1	7.08	C-3	NA	2015
E-10	RAP bin #2		C-3	NA	2015
R-3	RAP bin #3		C-3	NA	2000
R-12	RAP conveyor #1		C-3	NA	2000
R-7	RAP conveyor #2		C-3	NA	2000
R-5	RAP conveyor #3		C-3	NA	2000
R-8	RAP conveyor #4		C-3	NA	2000
R-9	RAP conveyor #5		C-3	NA	2000
R-13	RAP conveyor #6		C-3	NA	2000
E-12	RAP screen #1		C-3	NA	5/2006
R-6	RAP screen #2		C-3	NA	2000
R-4	RAP crusher [25]		C-3	NA	2000

[24] The District STAR regulations are not applicable to this unit because this unit does emit any TACs.

[25] The District has determined that the Recycled Asphalt Product (RAP) crusher is not subject to 40 CFR Part 60, OOO. "Nonmetallic mineral" means any of the minerals or any mixture of which the majority is any of the minerals listed in section 60.671(a) to (r) of Subject OOO. Generally, both concrete and asphaltic concrete are composed mostly of minerals covered in section 60.671. Given the RAP crusher will reduce the material to one-half inch in size or larger, the District has determined that the RAP crusher does not meet the definition of crushing or grinding as defined in Subpart OOO. (Permit 661-07-C)

U3 Control Devices:

Control ID	Description	Control Efficiency	Performance Indicator	Stack ID
C-3	Water suppression system	50%	NA	NA

U3 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **PM/PM_{10}**

i. The owner or operator shall not allow the PM emissions to exceed 43.11 lb/hr from the Recycle Asphalt Product (RAP) process which includes the crusher, hopper, screener and conveyor systems combined. [26] (Regulation 7.08, section 3.1.2)

ii. For additional PM/PM_{10} standards see Emission Unit Plant-wide.

b. **Opacity**

The owner or operator shall not allow or cause visible emissions to equal or exceed twenty percent (20%) opacity from any PM emission point of the RAP process operation including the crusher, hopper, screener, and conveyors. (Regulation 7.08, section 3.1.1)

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **PM/PM_{10}**

i. There are no monitoring or record keeping requirements related to the lb/hr emission standard for this emission unit to comply with Regulation 7.08.

ii. For additional PM/PM_{10} monitoring and record keeping requirements see Emission Unit Plant-wide.

b. **Opacity**

i. The owner or operator shall monthly conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall

[26] The District has determined that the lb/hr limit cannot be exceeded uncontrolled by the equipment combined.

perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall monthly maintain records that show the results of all visible emissions surveys and Method 9 tests performed. The records shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what is any corrective action was taken to minimize visible emissions. If the RAP process operation is not being operated during a given day, then no visible emission survey is required to be performed and a negative declaration shall be entered in the record.

S3. **Reporting** (Regulation 2.17, section 5.2)

a. **PM/PM_{10}**

For additional PM/PM_{10} reporting requirements see Emission Unit Plant-wide.

b. **Opacity**

i. The owner or operator shall report the following opacity records:

1) The beginning and end date of the reporting period.

2) The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If not visible emissions were observed during the reporting period, the owner or operator shall submit a negative declaration.

3) The date, time and results of each Method 9 conducted. If there were no Method 9 tests performed during the reporting period, the owner or operator shall submit a negative declaration.

4) A description of any corrective action taken for each exceedance of the opacity standard.

5) A negative declaration if no exceedances occurred.

Emission Unit U4: HMA Operation

U4 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.08	Standards of Performance for New Process Operations	3.11, 3.12
7.09	Standard of Performance for New Process Gas Streams	4, 5
7.11	Standard of Performance For New Asphalt Paving Operations	3.1.1
40 CFR Part 60, Subpart I	Standards of Performance for Hot Mix Asphalt Facilities	§60.90 - §60.93

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.14	Hazardous Air Pollutants and Source Categories	1, 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards	All

U4 Equipment:

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
E-3 (a)	Aggregate bin #1	7.08	C-3	NA	5/2006
E-3 (b)	Aggregate bin #2		C-3	NA	5/2006
E-3 (c)	Aggregate bin #3		C-3	NA	5/2006
E-3 (d)	Aggregate bin #4		C-3	NA	5/2006
E-3 (e)	Aggregate bin #5		C-3	NA	5/2006
E-3 (f)	Aggregate bin #6		C-3	NA	5/2006
E-3 (g)	Aggregate bin #7		C-3	NA	5/2006

Emission Point	Description	Applicable Regulation	Control ID	Stack ID	Installation Date
E-4	Aggregate conveyor #1	7.08	C-3	NA	5/2006
E-7	Aggregate conveyor #2		C-3	NA	5/2006
E-8	Aggregate conveyor #3		C-3	NA	5/2006
E-13	Aggregate conveyor #4		C-3	NA	5/2006
E-11	Aggregate conveyor #5		C-3	NA	5/2006
E-15	Drag slat conveyor		NA	NA	5/2006
E-16	Silo drag slat conveyor #1		NA	NA	5/2006
E-17	Silo drag slat conveyor #2		NA	NA	5/2006
E-18	Silo drag slat conveyor #3		NA	NA	5/2006
E-5	Aggregate screen		C-3	NA	5/2006
E-14	Counterflow drum mixer/burner	5.00, 5.01, 5.14, 5.20, 5.21, 5.22, 5.23, 7.09, 7.11, 40 CFR Part 60 Subpart I	C-1, C-2	S-1	3/2010
E-19 (IA)	HMA silo #1	7.08	NA	NA	5/2006
E-20 (IA)	HMA silo #2		NA	NA	5/2006
E-21 (IA)	HMA silo #3		NA	NA	5/2006
E-22 (IA)	HMA silo #4		NA	NA	5/2006
E-23 (IA)	Load-out station		NA	NA	5/2006

U4 Control Devices:

Control ID	Description	Control Efficiency	Performance Indicator	Stack ID
C-1	Process cyclone precipitator with mineral filler silo	90%	VE survey	S-1
C-2	Baghouse	95%	Pressure drop	S-1
C-3	Water suppression system	50%	NA	NA

U4 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **PM/PM_{10}**

i. The owner or operator shall not discharge or cause to be discharged into the atmosphere from E-14 any gasses that contain particulate matter in excess of 90 mg/dscm (0.040 gr/dscf) based on one calendar day. (Regulation 7.11, section 3.1.1)(40 CFR 60.92(a)(1))

ii. The owner or operator shall not cause or allow the emissions of particulate matter from the listed emission points to exceed the following limits: [27] (Regulation 7.08, section 3.1.2, Table 1)

Emission Point ID	Equipment	Capacity	Limit (lb /hr)
E-3 (a)	Aggregate bin #1	500 tph	46.79
E-3 (b)	Aggregate bin #2	500 tph	46.79
E-3 (c)	Aggregate bin #3	500 tph	46.79
E-3 (d)	Aggregate bin #4	500 tph	46.79
E-3 (e)	Aggregate bin #5	500 tph	46.79
E-3 (f)	Aggregate bin #6	500 tph	46.79
E-3 (g)	Aggregate bin #7	500 tph	46.79
E-4	Aggregate conveyor #1	500 tph	46.79
E-7	Aggregate conveyor #2	500 tph	46.79
E-8	Aggregate conveyor #3	500 tph	46.79
E-13	Aggregate conveyor #4	500 tph	46.79
E-11	Aggregate conveyor #5	500 tph	46.79
E-15	Drag slat conveyor	500 tph	46.79
E-16	Silo drag slat conveyor #1	500 tph	46.79
E-17	Silo drag slat conveyor #2	500 tph	46.79
E18	Silo drag slat conveyor #3	500 tph	46.79
E-5	Aggregate screen	300 tph	41.48
E-14	Drum mixer	500 tph	46.79
E-19	HMA silo #1	500 tph	46.79
E-20	HMA silo #2	500 tph	46.79
E-21	HMA silo #3	500 tph	46.79
E-22	HMA silo #4	500 tph	46.79
E-23	Load-out station	500 tph	46.79

[27] The listed equipment (E-3, E-4, E-7, E-8, E-13, E-11, E-15, E-16, E-17, E-18, E5, and E19 through E-23) cannot individually exceed the stated lb/hr standard uncontrolled. Emission point E-14, Drum Mixer, needs to be controlled at all times to meet the lb/hr standard.

iii. The owner or operator shall operate and maintain the process cyclone and baghouse at all times the associated emission point (E-14) is in operation to meet PM standards specified in this permit. (Regulation 2.17, section 5.1)

1) The owner or operator shall daily operate and maintain the process cyclone and baghouse at all times counterflow drum mixer (E-14) is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.

2) The owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the cyclone and baghouse for signs of damage, air leakage, corrosion, etc. and repair shall be performed as needed.

iv. For additional PM/PM_{10} standards see Emission Unit Plant-wide.

b. **Opacity**

i. The owner or operator shall not discharge or cause to be discharged in to the atmosphere from E-14 any gasses that exhibit twenty percent (20%) opacity or greater. Where the presence of uncombined water is the only reason for failure to meet the requirements of this section, such failure shall not be a violation. (Regulation 7.11, section 3.1.2)(40 CFR 60.92(a)(2))

ii. For emission points E-3, E-4, E-7, E-8, E-13, E-11, E-15, E-16, E-17, E-18, E-5, and E-19 through E-23: The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. (Regulation 7.08, section 3.1.1)

c. **CO**

i. The owner or operator of a facility shall not emit carbon monoxide gasses from the HMA process (E-14) unless they are burned at 1,300 °F for 0.5 seconds or greater in a direct flame afterburner or equivalent device equipped with a pyrometer that is positioned in the working area at the operator's eye level. [28] (Regulation 7.09, section 5.1)(Permit 56-10-C)

ii. For additional CO standards see Emission Unit Plant-wide.

[28] The CO emissions from the process are created by the combustion of fuel oil or natural gas to generate heat required for removing moisture from aggregate and heating the aggregate for the production of hot mix asphalt. The nominal flame temperature of greater than 2,000 °F exceeds the 1,300 °F temperature requirement of Regulation 7.09, Section 5.1. (Permit 56-10-C)

d. **NO_X**

i. The owner or operator shall not discharge or cause to be discharged into the atmosphere from E-14 any gases that contain the pollutant NO_X in excess of three hundred parts per million (300 ppm) by volume, expressed as NO_2. [29] (Regulation 7.08, section 4.1)(Permit 56-10-C)

ii. For additional NO_X standards see Emission Unit Plant-wide.

e. **VOC**

i. The owner or operator shall not use, sell for use, manufacture, mix or store cutback asphalts or unacceptable emulsion asphalts for asphalt paving operations, except as exempted in Regulation 7.11, section 5. (Regulation 7.11, section 4)

ii. For additional VOC standards see Emission Unit Plant-wide.

f. **SO_2**

i. The owner or operator shall not allow the emissions from the HMA Drum Mixer (E-14) of the pollutant SO_2 to equal or exceed forty (40) tons during any twelve (12) consecutive month period. [30] (Regulation 7.09, section 4)

ii. The owner or operator shall limit the sulfur content of the #4 fuel oil combusted by the hot mix asphalt plant drier/heater to contain less than 0.5% sulfur by weight. [31] (Regulation 2.17, section 5.1)(Permit 56-10-C)

g. **TAC**

i. The owner or operator shall not allow TAC emissions for the counterflow drum mixer with burner (E-14) to exceed the TAC emission standards listed in the following table. [32] (Regulation 5.21, section 4.2 and section 4.3)

[29] Manufacturer's data states worst case NOx emissions using #2 fuel oil at less than 170 ppm, corrected to 3% O_2 dry, therefore the NOx standard cannot be exceeded.

[30] The synthetic limit reduces the emissions of criteria pollutant SO_2 to less than forty (40) tons during any twelve (12) consecutive month period standards. (Permit 56-10-C)

[31] Source provided laboratory results for #4 fuel oil, received on Sept. 2, 2008, showing sulfur content of 0.4169%. (Permit 56-10-C)

[32] This unit has TAC emission standards since its EA Demonstration was based on controlled PTE. If the controlled PTE for the TAC is less than de minimis level, use De Minimis as limit. If the controlled PTE for the TAC is greater than de minimis level, modeling results were used to calculate risk value to compare to the EA Goals and controlled PTE is used as limit.

Emission Point	TAC	CAS #	TAC Limits Determination [33]	
			(lbs./12-consecutive month period)	Basis of Limits
E-18	Formaldehyde	50-00-0	12467	Controlled PTE
	Chromium VI	7440-47-3	13.40	Controlled PTE
	Cobalt	7440-48-4	64.70	Controlled PTE
	Nickel	7440-02-0	615.00	Controlled PTE

ii. The owner or operator shall operate and maintain the Cyclone precipitator (C-1) and Baghouse (C-2) at all times when the HMA operation is in production, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 5.21, section 4.2 and section 4.3)

iii. For additional TAC standards see Emission Unit Plant-wide.

h. **Unit Operation**

For Counterflow Drum Mixer (E-14) asphalt production limitations and fuel combustion standards and limitations see Emission Unit Plant-wide.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **PM/PM_{10}**

i. The owner or operator shall, daily, monitor and record the pressure drop across the baghouse tube sheet (C-2) and note if the differential pressure is out of the range of 2-6" W.C.

ii. If there is any time that the control device (C-1, C-2) is bypassed or not in operation, or the pressure drop is out of range when the associated HMA production equipment (E-14) is operating, then the owner or operator shall keep a record of the following for each excursion event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) PM emissions during the bypass in lb/hr;

[33] The owner or operator may comply with these emission limits through production limits and fabric filter controls.

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

8) A negative declaration if no excursions were experienced during the reporting period.

iii. The owner or operator shall monthly keep records of the visual inspection of the structural and mechanical integrity of the process cyclone and baghouse. Records shall include:

1) Date of the inspection;

2) Name of the person that performed the inspection;

3) Description of any equipment defects observed including damages, leakage, corrosion, or other defects that would cause a reduction on the control efficiency;

4) Description of any repairs made or replacement of system components; and

5) Description of all corrective actions taken to abate the situation.

iv. Subsequent compliance with the stack emissions limit can be demonstrated by calculating PM emissions using an emission factor derived from a valid stack test and the product throughput. [34]

E_{PM} = (X)(EF)(BC)(7000 grains/1 lb)(1 month/720 hrs)

Where: E_{PM} = controlled or uncontrolled PM stack emissions (grains/cf)

X = the amount of material HMA (Tons) produced during the month

EF = 0.00256 lb/ton HMA produced (controlled)

EF = 0.0128 lb/ton HMA produced (uncontrolled) [35]

BC = 1 hr/3059160 cf baghouse capacity

v. The owner or operator shall keep records of the preventative maintenance performed on the baghouse and be made available to the District upon request.

[34] A Method 5 stack test was performed on August 20 and 21, 2010 (DM#: 11432) . The Method 5 test showed that the baghouse was operating within the limit of 0.040 grains/dscf and had an average emission rate of 0.0046 grains PM/dscf (1.28 lb PM/hr). During the test the average baghouse flowrate was 50986 cf/min (3059160 cf/hr). The limiting capacity of the Drum mixer (E-14) is 500 tph, therefore, the emission rate of 1.28 lb/hr / 500 ton/hr, can be expressed as 0.00256 lb/ton of HMA produced.

[35] The District has assumed a 98% efficiency rate to determine the uncontrolled emission factor from the controlled emission factor. This efficiency may be changed when the next Stack Test is performed.

vi. To monitor ongoing compliance with the PM emissions standard, the owner or operator of the baghouse shall comply with the following:

1) The condition of the bags shall be checked on a bi-monthly basis and the bags shall be replaced as needed.

2) A bi-monthly log of visual baghouse inspections shall be maintained.

3) A bi-monthly log of bag replacements shall be maintained.

4) A bi-monthly log of baghouse dust removal shall be maintained.

5) A weekly log book of daily pressure drop gauge readings across the baghouse shall be maintained.

6) Each baghouse shall be checked on an annual basis for ruptured bags, using fluorescent dye; the results of these tests shall be noted in the log book.

vii. For additional PM/PM_{10} monitoring and record keeping requirements see Emission Unit Plant-wide.

b. **Opacity**

i. For the baghouse (C-2), the owner or operator shall:

1) Perform visible emissions surveys as required to be used as an indicator of performance in addition to verifying compliance with the opacity standard.

ii. The owner or operator shall monthly conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight (8) hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iv. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission

survey needs to be performed and a negative declaration shall be entered in the record.

c. **CO**

i. No monitoring or record keeping is required to show compliance with the process burn temperatures related to Regulation 7.09.

ii. For additional CO monitoring and record keeping requirements see Emission Unit Plant-wide.

d. **NO_X**

i. No monitoring or record keeping is required to show compliance with the parts-per-million discharge standard related to Regulation 7.08.

ii. For additional NO_X monitoring and record keeping requirements see Emission Unit Plant-wide.

e. **VOC**

For additional VOC monitoring and record keeping requirements see Emission Unit Plant-wide.

f. **SO_2**

i. The owner or operator shall monthly maintain records, including calculations, of the monthly total and the twelve (12) consecutive month total SO_2 emissions from the HMA Drum Mixer (E-14).

ii. The owner or operator shall monthly maintain records of the shipment certification provided by the supplier upon delivery. [28]

iii. The owner or operator shall daily maintain records of the amount of product (HMA) produced.

iv. The owner or operator shall monthly calculate the SO_2 emissions from HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	SO_2	Emission Factor Sources
Drum mixer burning No. 2 fuel oil	0.011 lb/ton	AP-42 Chapter 11.1-7
Drum mixer burning natural gas	0.003 lb/ton	AP-42 Chapter 11.1-7

v. Using the above Emission Factors calculating the tons per month SO_2 emissions is as follows:

E_{SO2} = (X)(EF lb/ton)(1 ton/2000 lb.)

Where: E_{SO2} = SO_2 emissions (tons) during a consecutive 12-month period

X = the amount of HMA produced (tons), during a consecutive 12-month period

g. **TAC**

i. The owner or operator shall monthly maintain records, including calculations, which show the emission unit TAC emissions during each calendar month and consecutive 12-month period.

ii. The owner or operator shall monthly calculate the TAC emissions from HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled [36] Emission Factors	Emission Factor Sources
E-18	Formaldehyde	lb/ton	3.10E-3	3.10E-3	**AP 42 Table 11.1-12**
	Chromium VI	lb/ton	4.5E-5	4.5E-7	
	Cobalt	lb/ton	1.5E-5	2.60E-8	
	Nickel	lb/ton	1.3E-3	6.30E-5	

iii. Using the above Emission Factors calculating the tons per month TAC emissions, for both controlled and uncontrolled conditions, is as follows:

E_{TAC} = (X)(EF lb/ton)

Where: E_{TAC} = TAC emissions (tons) during a consecutive 12-month period

X = the amount of HMA produced (tons) during a consecutive 12-month period

iv. If there is any time that the Cyclone Precipitator (C-1) and Baghouse (C-2) are bypassed or not in operation when the HMA operation (E-18) is in production, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

[36] Controlled emission factor for Drum Mixer derived from District estimated 98% control efficiency for the baghouse for the TACs except Antimony which the uncontrolled emission factor was derived based on estimated 98% efficiency for the baghouse.

4) TAC emissions during the bypass, in lb/12 consecutive month period;

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

v. For additional TAC monitoring and record keeping requirements see Emission Unit Plant-wide.

h. **Unit Operation**

For fuel combustion monitoring and record keeping requirements for the Counterflow Drum Mixer (E-14) see Emission Unit Plant-wide.

S3. **Reporting** (Regulation 2.17, section 5.2)

a. **PM/PM_{10}**

i. The owner or operator shall report the following baghouse monitoring records:

1) The beginning and end dates of the reporting period;

2) Any failure to daily monitor or record the pressure drop for the baghouse;

3) Any excursions from the stipulated pressure drop that would indicate an interruption of baghouse performance;

4) A negative declaration if no excursions occurred.

ii. The owner or operator shall report the following baghouse records:

1) The beginning and end dates of the reporting period;

2) The number of times the PM vent stream bypassed the control device and is vented to the atmosphere;

3) The duration of each bypass to the atmosphere

4) The calculated pound per bypass event PM emissions for each bypass.

5) A negative declaration if no bypass occurred.

iii. The owner or operator shall report the following stack emission records:

1) The beginning and end dates of the reporting period;

2) The number of times the baghouse operated uncontrolled;

3) The calculated gr/cf emissions during the uncontrolled event;

4) The number of times the gr/cf standard was exceeded;

5) The calculated gr/cf emissions during the exceedance;

6) The reason for the exceedance

7) A negative declaration if no uncontrolled or limit exceedances occurred.

iv. For additional PM/PM_{10} reporting requirements see Emission Unit Plant-wide.

b. **Opacity**

i. The owner or operator shall report the following opacity records:

1) The beginning and end date of the reporting period.

2) The date, time and results of each visible emissions survey conducted that resulted in visible emissions being observed. If not visible emissions were observed during the reporting period, the owner or operator shall submit a negative declaration.

3) The date, time and results of each Method 9 conducted. If there were no Method 9 tests performed during the reporting period, the owner or operator shall submit a negative declaration.

4) A description of any corrective action taken for each exceedance of the opacity standard.

5) A negative declaration if no exceedances occurred.

c. **CO**

i. There are no CO emissions reporting requirements for this emission unit related to Regulation 7.09.

ii. For additional CO reporting requirements see Emission Unit Plant-wide.

d. **NO_X**

i. There are no additional NO_X reporting requirements for this emission unit related to Regulation 7.08.

ii. For additional NO_X reporting requirements see Emission Unit Plant-wide.

e. **VOC**

i. There are no additional VOC reporting requirements for this emission unit related to Regulation 7.11.

ii. For additional VOC reporting requirements see Emission Unit Plant-wide.

f. **SO_2**

i. The owner or operator shall report the following SO_2 records in the annual compliance report:

1) The beginning and end date of the reporting period.

2) The monthly and twelve (12) consecutive month period totals of the SO_2 emissions emitted each month during the reporting period.

3) Any exceedances of the SO_2 emission standard.

4) Any exceedances of the fuel sulfur content standard

5) Any failure to monitor or record fuel shipment certifications

6) A negative declaration if no excursions occurred.

g. **TAC**

i. The owner or operator shall report the following information regarding bypass activity in the annual compliance reports.

1) The beginning and end date of the reporting period.

2) Number of times the vent stream bypasses the Baghouse (C-2) and is vented to the atmosphere when the HMA Operation is in production;

3) The duration of each bypass to the atmosphere;

4) The calculated TAC emissions, in lb/12 consecutive month period, for each bypass and identification of any exceedance of the TAC standards; or

5) A negative declaration if no bypasses occurred.

ii. For additional TAC reporting requirements see Emission Unit Plant-wide.

h. **Unit Operation**

For additional Unit Operation reporting requirements for the counterflow drum mixer (E-14) see Emission Unit Plant-wide.

S4. **Testing** (Regulation 2.17, section 5.2)

The owner or operator shall conduct performance testing in a manner consistent with the following resting requirements.

General Testing Requirements:

Plant-wide the owner or operator shall retest control device (C-2) within ten (10) years since the most recent District accepted performance test or within 180 days after the

effective date of the permit if no previous test has been performed, unless the District requires a different time schedule. For equipment which has been tested but not within ten years prior to the effective date of this permit the Company may submit within 90 days of the effective date of this permit, contingent on approval by the District, a schedule which shall at a minimum propose testing for all affected equipment within this permit cycle. Thereafter the Company shall retest each affected device at least once every 10 years. Devices of adequately similar design and filter media may be represented by a common performance test contingent upon review and approval by the District of the testing protocol. In lieu of the control efficiency testing, unless required by a Federal Regulation, the owner or operator may submit a signature guarantee from the control device manufacture stating the control device efficiency.

The owner or operator shall use the most recent District accepted performance test results to demonstrate compliance with the emission limits and in the annual emission inventory reporting.

If performance testing is not completed by the required date, then the company shall calculate emissions using expired test result data or methods such as EPA approved emission factors and guidance documents such as EIIP and AP-42 or other methods upon written approval by the District, whichever results in the greater (more conservative) emissions.

a. **PM/PM_{10}**

i. The owner or operator shall perform an EPA Reference Method 5 PM performance test on the inlet and outlet of the control device or emission point to determine the emission rate and control efficiency. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.

ii. The owner or operator shall submit written compliance test plans (protocol) for the control efficiency. They shall include the EPA test methods that will be used for PM compliance testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators (e.g. pressure drop) that will be monitored during the performance test. The compliance test plans shall be furnished to the District at least 30 days prior to the actual date of the performance test. Attached to the permit is a Protocol Checklist for a Performance Test with the information to be submitted in the protocol.

iii. The owner or operator shall provide the District at least 10 days prior notice of any performance test to afford the District the opportunity to have an observer present.

iv. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 days following the actual date of completion of the performance test.

b. **Opacity**

The owner or operator shall demonstrate compliance with the opacity limit by initially conducting a test in accordance with Method 9 of 40 CFR 60 Appendix A at the same time as the Method 5 PM performance test. The test shall be performed at maximum capacity or allowable/permitted capacity or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test at these conditions may necessitate a re-test. The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages).

Insignificant Activities

Emission Process	Equipment Description	Quantity	PTE (tpy) each	Regulation Basis
Aggregate Stockpile	Open stockpile, virgin limestone & sand, height =13' width = 30' length = 100', 0.35 miles paved road (39000 ft^3 capacity)	1	PM_{10}=0.53 PM=1.13	Regulation 1.02
Aggregate Stockpile	Open stockpile, virgin RAP, height =13' width = 30' length = 100', 0.35 miles paved road (52000 ft^3 capacity)	1	PM_{10}=0.53 PM=1.13	Regulation 1.02
Aggregate Stockpile	Open stockpile, processed RAP, height =13' width = 30' length = 100', 0.35 miles paved road (52000 ft^3)	2	PM_{10}=0.53 PM=1.13	Regulation 1.02
Asphalt Storage Tank	Homemade, vertical, 25,000 gallon	1	VOC= 0.06	Regulation 1.02
Asphalt Storage Tank	Homemade, vertical, 22,000 gallon	2	VOC= 0.06	Regulation 1.02
Asphalt Storage Tank	UNK, vertical, 15,000 gallon	1	VOC= 0.06	Regulation 1.02
Asphalt Storage Tank	UNK, vertical, asphalt mix additive, 7,500 gallon	1	VOC= 0.06	Regulation 1.02
Hot Oil Transfer	Gencor, horizontal, transfer oil tank	1	PM_{10}=0.13	Regulation 1.02

Emission Process	Equipment Description	Quantity	PTE (tpy) each	Regulation Basis
Heater*	with 2 MMBtu/hr burner, natural gas, 50-gallon		PM=0.13 VOC=0.036 NO_X=1.28 $CO_=$0.077 SO_2=4.54	
Load-Out Station	Load-out station, 500 tph	1	PM_{10}=1.14 PM=1.14 VOC=2.27 CO=0.73	Regulation 1.02

* Emissions included as part of the Drum Mix emissions.

1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.

3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.

6) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Fee Comment

1. On May 15, 2013, the Board approved revisions to Regulation 2.08, which implemented a new fee structure. As a result, Louisville Paving Company, Inc. will be required to annual fees.

2. The administrative fee in the amount of $518.85 is due to a company name change on 1/4/2012, STAR review fees in the amount of $1,556.54 for EPA Environmental Acceptability Demonstration with Tier 3 modeling, and $518.90 for TAC De Minimis determinations result in total permit fees due of $2,594.29 which is required to be paid prior to the issuance of this permit.

Attachment A -- District Approved Calculation Methodology[37]

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **TAC**

i. The owner or operator shall calculate the TAC emissions from HMA production based on product throughput and emission factors stated in the Table below unless another method is approved in writing by the District.

Emission Source	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled [38] Emission Factors	Emission Factor Sources
E-18	Arsenic	lb/ton	1.30E-06	5.60E-07	AP 42 Table 11.1-12
	Benzene	lb/ton	3.90E-04	3.90E-04	
	Cadmium	lb/ton	4.20E-06	4.10E-07	
	Chromium III	lb/ton	5.05E-04	5.05E-06	
	Copper	lb/ton	1.70E-04	3.10E-06	
	Lead	lb/ton	5.40E-04	6.20E-07	
	Manganese	lb/ton	6.50E-04	7.70E-06	
	Naphthalene	lb/ton	9.00E-05	9.00E-05	
	Ethylbenzene	lb/ton	2.40E-04	2.40E-04	
	Phosphorous	lb/ton	1.20E-03	2.80E-05	

ii. Using the above Emission Factors calculating the tons per year TAC emissions, for both controlled and uncontrolled conditions, is as follows:

E_{TAC} = (X)(EF lb/ton)

Where: E_{TAC} = TAC emissions (tons) annually

- X = the amount of HMA produced (tons) annually

[37] The pollutants covered in this attachment do not have limits to avoid being a major source, but the emission factors and methodology are to be used when calculating emissions for these pollutants to report to the District as required.

[38] Controlled emission factor for Drum Mixer derived from District estimated 98% control efficiency for the baghouse for the TACs except Antimony which the uncontrolled emission factor was derived based on estimated 98% efficiency for the baghouse.

Attachment B - Protocol Checklist for a Performance Test

A completed protocol should include the following information:

- ☐ 1. Facility name, location, and ID #;
- ☐ 2. Responsible Official and environmental contact names;
- ☐ 3. Permit numbers that are requiring the test to be conducted;
- ☐ 4. Test methods to be used (i.e. EPA Method 1, 2, 3, 4, and 5);
- ☐ 5. Alternative test methods or description of modifications to the test methods to be used;
- ☐ 6. Purpose of the test including equipment and pollutant to be tested; the purpose may be described in the permit that requires the test to be conducted or may be to show compliance with a federal regulation or emission standard;
- ☐ 7. Tentative test dates (These may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation.);
- ☐ 8. Maximum rated production capacity of the system;
- ☐ 9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits);
- ☐ 10.Method to be used for determining rate of production during the performance test;
- ☐ 11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance;
- ☐ 12. Description of normal operation cycles;
- ☐ 13. Discussion of operating conditions that tend to cause worse case emissions; it is especially important to clarify this if worst case emissions do not come from the maximum production rate;
- ☐ 14. Process flow diagram;
- ☐ 15. The type and manufacturer of the control equipment, if any;
- ☐ 16. The control equipment (baghouse, scrubber, condenser, etc.) parameter to be monitored and recorded during the performance test. Note that this data will be used to ensure representative operation during subsequent operations. These parameters can include pressure drops, flow rates, pH, and temperature. The values achieved during the test may be required during subsequent operations to describe what pressure drops, etcetera, are indicative of good operating performance; and
- ☐ 17. How quality assurance and accuracy of the data will be maintained, including;
    - Sample identification and chain-of-custody procedures
    - If audit samples are required for this test method, audit sample provider and number of audit samples to be used
- ☐ 18. Pipe, duct, stack, or flue diameter to be tested;
- ☐ 19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet;
- ☐ 20. Determine number of traverse points to be tested for outlet and additionally for inlet if required using Appendix A-1 to 40 CFR Part 60;
    - Method 1 if stack diameter is >12"
    - Method 1a if stack diameter is greater than or equal to 4" and less than 12"
    - Alternate method of determination for <4"
    - If a sample location at least two stack or duct diameters downstream and half a diameter upstream from any flow disturbance is not available then an alternative procedure is available for determining the acceptability of a measurement location. This procedure described in Method 1, Section 11.5 allows for the determination of gas flow angles at the sampling points and comparison of the measured results with acceptability criteria.
- ☐ 21. The Stack Test Review fee shall be submitted with each stack test protocol.

Attachment C – Dust Control Plan

FUGITIVE DUST CONTROL PLAN

Louisville Paving Company, Inc.
12613 Avoca Road (13400 Old Henry Road)
Louisville, Kentucky 40223

Introduction

This Fugitive Dust Control Plan has been prepared to comply with the requirements of Regulation 1.14 of the Louisville Metro Air Pollution Control District (APCD) for the Louisville Paving Company facility located at 12613 Avoca Road (13400 Old Henry Road).

Administration of Plan

The Office Manager and the Yard supervisor are responsible for implementing dust control procedures. The Yard supervisor will assess the site daily for needed dust control. He will be onsite to implement the plan. The Quality Control Manager Matthew Riggle will be onsite for the District to contact. Copies of the Fugitive Dust Control Plan are on file at the facility for use by personnel and have been submitted to the APCD for review.

Office Manager: John Dougherty	Contact Number: (502) 583-1726
Quality Control Manager: Matthew Riggle	Contact Number: (502) 471-1130
Office Manager after hours: Matthew Riggle	Contact Number: (502) 471-1130
Responsible Official: Kevin Klain	Contact Number: (502) 471-1126

Description of Facility

The Louisville Paving Company, Inc. site is a 118 acre property located at 12613 Avoca Road (13400 Old Henry Road) in Louisville, Kentucky. The site is bordered by Old Henry Road to the north which curves to also form the western border, Avoca Road to the south, and the Gene Snyder Freeway to the east. The site is utilized for underground limestone mining and crushed stone products, asphalt paving products, cementitious concrete products, and cement block manufacturing and sales.

Approximately 24 acres at the far west of the site, including the Lee Brick & Blok plant and the inactive quarry no. 1, are not included in this plan.

The front of the site features inactive quarry no. 2 and inactive quarry no. 3, and a quarter-mile long paved entrance road leading to the Rogers Group, Inc. - Jefferson County Stone scalehouse. The site is heavily wooded through this area. South of the scalehouse, the road becomes a gravel road leading past the Louisville Paving asphalt plant down to the IMI Concrete plant. The gravel road also forks to the west, leading into the Jefferson County Stone maintenance shop, stockpiling, and crushing plant areas. These areas are gravel-covered as well.

Dust Control Measures

The following measures will be used to control dust at the Louisville Paving Company, Inc. site:

1. Site Monitoring

The quarry superintendent and/or plant operators will be present whenever any of the three plants are in operation. These operators will assess the need for dust control on an hourly basis at all times that the facilities are open for business.

When needed, a water truck will be utilized to wet the plant areas to prevent fugitive dust emissions from forming. The water truck will not be used when the ambient air temperature falls below freezing and may be suspended when weather conditions contribute to the control of fugitive dust emissions (i.e. periods of rainfall) in these areas.

2. Traffic Maintenance

When all of the plants on the site are operating, there may be over 500 truck trips per day on the site. These trucks may me delivering raw materials for production or delivering finished products for shipment to customers.

The trucks delivering raw materials may be either self-contained trucks or open haul trucks. The self-contained trucks pump their contents into silos or tanks which are vented and do not generate fugitive dust. If the equipment is faulty or not in proper working condition, pumping of these materials will be suspended until the problem is corrected. The open haul tracks are used to deliver sand or aggregate either from the quarry stockpile area or from off site. These haul trucks use the watered access roads on site to prevent the generation of fugitive dust.

Trucks which are delivering finished products off the site are tarped and will use the paved entrance road which is controlled by the sprinkler system in order to leave the site.

All other passenger vehicles including employee vehicles are limited to using the designated employee parking lots on the site to prevent the generation of fugitive dust.

3. Pavement Management

A sprinkler system has been installed along the entrance road from the property entry to the scalehouse. This system is being upgraded to extend past the scalehouse and south to the concrete plant site. The sprinkler system is used during periods of dry weather and keeps the road moist along its entire length to prevent fugitive dust emissions from truck traffic. The sprinkler system will be disabled when the ambient air temperature falls below freezing. If the weather conditions contribute to the control of fugitive dust emissions (i.e. during periods of rainfall), the sprinkler operation may be suspended until it is determine that fugitive dust emissions control is again needed.

A water retention area consisting of a water-filled dip at the southern end of the entrance road near the scale house will be constructed. All traffic leaving the site will be routed through the dip, which will be designed to wet the vehicle wheel to loosen any material accumulated on them. Following the water retention area will be a set of rumble strips to shake off the loosened material onto the entrance road before the vehicle exits the site. At the northern end of the entrance road, a 3-inch rise from the surface of the entrance road to that of Old Henry Road will be smoothed out be building as asphalt "ramp" to lessen the jolt on vehicles as they hit the bump up to Old Henry Road, which has caused material to fall onto Old Henry Road just outside the site boundary.

4. Crushing Plant and Stockpiling Area Maintenance

Fugitive dust is initially controlled throughout the limestone crushing plant by the underground-mined limestone's inherent moisture content. Crushing and screening process are located under partial covered structures, and dust suppression equipment is used at strategic areas to control fugitive dust.

Stockpiles and gravel storage areas are watered periodically as needed to prevent the migration of fugitive dust. The gravel layer in these areas is maintained to a depth of no less than four inches.

A spray bar system has been installed on the highly visible stacking conveyor above the large base stone stockpile at the crushing plant. This water spray system will be used to wet the stockpile on windy days when fugitive dust is likely to blow from the top of the stockpile across the site boundary towards the wooded area to the north. This spray system is subject to the restrictions of not being used when ambient temperatures are below freezing or when wet weather contributes to the control of fugitive dust emission from the stockpile.

5. Speed Control Measures

All trucks entering and exiting the site are stopped for ticketing by the businesses in order to maintain an accurate count of inventory and sales. The speed limit for the site, including the paved entrance road, is 15 miles per hour. Jefferson County Stone has reached an agreement with the Louisville Police Department to allow the site to use a trailer-mounted, radar-equipped speed limit sign along the entrance road which can be programmed to take a photo of vehicles violating a posted speed limit. The sign will show an approaching vehicle's speed, turn red, when that speed is greater than 15 mph, and take a photo of the vehicle if its speed is greater than 20 mph. The photos can then be downloaded and the offenders notified and banned from the site if necessary. This trailer-mounted sign may only be used by the site when it is available from the police department; therefore, it will not be possible to schedule a particular time or length of stay for the sign on the entrance road.

Attachment D - Determination of Benchmark Ambient Concentration (BAC)

Determination of Benchmark Ambient Concentration (BAC) **Category _____ No. _____**

TAC _____ **CAS No.** _____-_____-____

_____ **Mol. Wt. _____**

BAC_C = _____ µg/m³ Annual **BAC_{NC} = _____ µg/m³ _____ Averaging Period**

De Minimis_____ lb/hour; _____ lb/_____; _____ lb/year

I. Carcinogen Risk - BAC_C [Annual Averaging Period] Carcinogen . . . . ☐ yes ☐ no

1. ☐ IRIS ☐ no 10^{-6} risk = _____ µg/m³ URE _____ $(\mu g/m^3)^{-1}$ ___-___-___
2. ☐ Cal ☐ no 10^{-6} risk = _____ µg/m³ IUR _____ $(\mu g/m^3)^{-1}$ ___-___-___
3. ☐ MI ☐ no 10^{-6} risk = _____ µg/m³ ___-___-___
4. ☐ NTP Part A ☐ yes ☐ no Part B ☐ yes ☐ no
5. ☐ IARC Group 1 ☐ yes ☐ no Group 2A ☐ yes ☐ no Group 2B ☐ yes ☐ no
6. ☐ ATSDR ☐ no
7. ☐ Sec. 3.3.4 method _____ ☐ no 10^{-6} risk = _____ µg/m³ ___-___-___
8. ☐ Default 0.0004 µg/m³

II. Chronic Noncancer Risk - BAC_{NC} [Averaging Period as Specified]

1. ☐ IRIS ☐ no RfC = _____ µg/m³ Annual ___-___-___
2. ☐ Cal ☐ no REL = _____ µg/m³ Annual ___-___-___
3. ☐ IRIS[1] ☐ no RfD = _____µg/kg/day ⊗ 70/20 =_____µg/m³ Annual ___-___-___
4. ☐ MI ☐ no ITSL = _____ µg/m³_____ Averaging Period ___-___-___
5. ☐ TLV ☐ NIOSH _____ µg/m³ ⊗ 0.01 = _____ µg/m³ 8-Hr ___-___-___
6. ☐ RTECS[1] _____ _____ = _____ µg/m³ Annual
7. ☐ Default 0.04 µg/m³ Annual

III. De Minimis

1. ☐ Carcinogen (BAC_C) _____ µg/m³ ⊗ 0.54 = _____ lb/hour
   (BAC_C) _____ µg/m³ ⊗ 480 = _____ lb/year
2. ☐ Chronic Noncancer Risk _____ Averaging Period
   (BAC_{NC}) _____ µg/m³ ⊗ _____ = _____ lb/hour
   (BAC_{NC}) _____ µg/m³ ⊗ _____ = _____ lb/_____
   _____ lb/_____ ⊗ _____ _____ = _____ lb/year

[1] To use data based upon an oral route of exposure, the District must make an affirmative determination that data are not available to indicate that oral-route to inhalation-route extrapolation is inappropriate.

Prepared by _____ ___-___-___